

**Amendments to the Claims**

- 1-7. (Cancelled)
8. (Original) An automated system for selecting an archwire for a patient comprising:  
a patient internal arch curve recorder adapted to obtain a representation of the patient's internal arch curve;  
data on available archwires;  
~~a mechanism adapted to~~ a machine readable medium containing instructions which, when executed by a machine, cause the machine to compare an obtained representation of a patient's internal arch curve with the data on available archwires and to identify an archwire based on any such comparison.
9. (Original) The system of claim 8 wherein the system further comprises data relating to the current position, orientation, shape and/or size of the patient's teeth.
10. (Original) The system of claim 8 wherein the system further comprises an input mechanism adapted to accept a treatment diagnosis.
11. (Currently Amended) The system of claim 10 wherein the ~~mechanism adapted to compare an obtained representation of a patient's internal arch curve with data on available archwires is also adapted~~ instructions also cause the machine to utilize an input treatment diagnosis in identifying an archwire.
12. (Original) The system of claim 8 wherein the system comprises a communications mechanism adapted to communicate to an archwire supplier that the identified archwire is to be provided to a user of the system.
13. (Previously Presented) The system of claim 8 wherein the patient internal arch curve recorder comprises a means for obtaining an electronic representation of at least a portion of a study model or image.

14. (Previously Presented) The system of claim 13 wherein the patient internal arch curve recorder comprises a digital camera or scanner.
15. (Previously Presented) The system of claim 8 wherein the data on available archwires comprises data on archwires comprising one of at least three different shapes.
16. (Previously Presented) The system of claim 15 wherein the data on available archwires comprises data on at least two archwires having the same shape wherein one of the archwires is adapted for use in a non-extraction treatment plan and another of the archwires is adapted for use in an extraction treatment plan.
17. (Cancelled)
18. (Currently Amended) The system of claim 8 wherein the ~~system selects~~ instructions cause the machine to identify an archwire based on the shape of the patient's internal arch curve.
19. (Currently Amended) The system of claim 18 wherein the ~~system selects~~ instructions cause the machine to identify an archwire by comparing the shape of the patient's internal arch curve with the shapes of available archwires.
20. (Currently Amended) An automated system that includes a machine readable medium having one or more instructions for selecting an archwire for a patient ~~that selects, which~~ when executed by a processor cause the processor to select an archwire by:  
obtaining a representation of the patient's internal arch curve (PIAC);  
selecting an archwire shape based at least partially on the PIAC representation; and  
selecting an archwire to be used based on the selected archwire shape.